



Let There Be Night

Our overlighted planet has a dark side: the deaths of untold millions of birds

by RUTHANNE JOHNSON

When a friend mentioned the birds dying each night in Toronto's brightly lit downtown district, Michael Mesure had to see for himself if the rumor was true.

"The very next morning, I'm down there at 4:30 a.m.," Mesure says. As soon as he parked his car, he spotted a feathered corpse, then another and another: all victims of their fatal attraction to city lights.

Mesure began organizing volunteers to patrol the city, triaging injured birds and documenting the carnage. During fall or spring migration, a typical morning's rounds yielded 20 bodies. After a night of heavy rain or fog, the crew sometimes found hundreds.

Some buildings were obvious death traps, such as a tower that Mesure and his team—who formally organized as the nonprofit Fatal Light Awareness Program in 1993—monitored in the mid-1990s. Blanketed in intense beams of light, the concrete structure attracted hundreds of birds who collided with each other before hitting the tower. When the lights shut off at 1 a.m. each night, the birds still fluttering about—transfixed in the beams—fell en masse to the ground, Mesure says. Only a few could be saved.

Over the years, FLAP volunteers have collected more than 52,000 dead birds representing 164 species, many of them endangered or threatened. The most common victims are night-migrating songbirds, many of whom journey across all parts of North America, meaning virtually every city represents a threat, says Christine Sheppard, an evolutionary biologist with the American Bird Conservancy.

But as the magnitude of destruction becomes more widely known, concerned citizens are working to take back the night for the planet's birds.

BLINDED BY THE LIGHT

Scientists aren't sure why birds are attracted to artificial lights or how light pollution interferes with navigation. Red-eye travelers lured by urban sky glow appear disoriented, often

circling endlessly around light sources. Some die after slamming into buildings; others drop exhausted to the ground. Obscuring the extent of the losses are hungry predators, early-morning street cleaners, and the unknown number of birds who fly off only to die later from their injuries.

Nighttime death tolls are just part of the picture. The American Bird Conservancy estimates that 300 million to 1 billion birds each year perish from building collisions, the leading human-related cause of bird deaths. Particularly dangerous are windows that appear to offer clear flight paths or reflect images of the sky or nearby habitat. By drawing weary travelers into unfamiliar urban environments filled with such risks, light pollution is responsible for a significant number of daytime window strikes, Mesure says.

Many of the deadliest structures combine light and windows: Think glass-and-steel skyscrapers lit up like Christmas trees. Other times, a more innocuous-looking structure can take a large toll. When volunteers with the nonprofit group City Wildlife began documenting avian deaths in a 13-block swath of Washington, D.C., last year, they found 13 live birds and 25 dead ones in one weekend

alone. At one building, an exit sign that casts red light into the street has lured many hummingbirds to their deaths. At the federal judiciary building, more than 30 birds have died trying to reach lit trees inside a glass atrium. “Every building has its own pathology,” says Anne Lewis, an architect who founded City Wildlife.

Using data from patrols, the group identifies the worst culprits and encourages building managers and government officials to make changes. At the building with hummingbird deaths, a guard had also noticed the bodies. After City Wildlife volunteers explained the cause, he promised to work on a solution. Staff at the judiciary building responded to the group’s concerns, too, and began turning off the lights at night.

THE UNNATURAL LIGHTNESS OF BEING

Studies show that excess nighttime light disrupts the migration, breeding, and feeding patterns of a variety of species—from sea turtles to salamanders to fireflies. Research also indicates that it inhibits hormone production and disrupts biological rhythms, increasing the risk of certain cancers in some mammals, including humans, says Paul Beier, a conservation biologist with Northern Arizona University.

The consequences don’t end there. Light pollution obstructs astronomers, wastes energy, and costs \$2.2 billion a year in the U.S. alone, according to the International Dark-Sky Association.

While light pollution is increasing with development and urban sprawl, the movement to restore darkness to the night sky is gaining momentum. Boston, Chicago, San Francisco, Denver, Houston, Indianapolis, Portland, and other U.S. cities now have Lights Out campaigns, where building managers and individuals pledge to minimize nighttime lighting during migration seasons. Dozens of cities and states have passed or are considering light reduction measures, while a bill recently introduced in Congress would require federal buildings to address lighting and other bird safety issues.

In Toronto, FLAP has worked with more than 100 buildings to dim their lights during migration, including the once deadly tower. The city has adopted mandatory bird-friendly standards for new construction—such as shields on exterior light fixtures—and several owners of existing structures are working to reduce their toll on the feathered set. “Once one or two buildings make changes ... they set an example for others,” Mesure says.

FLAP’s success has inspired similar efforts in other communities. “I got tired of seeing all these dead birds,” says Wendy Olsson, an IT professional who founded Lights Out Baltimore.

Most mornings of the week, Olsson’s Baltimore crew and similar groups across the country walk their city streets at dawn, rescuing injured birds and gathering data that may one day ensure their feathered friends a safer journey.

Tips for Enlightened Living

Help create friendlier skies for migratory birds by following these easy tips

► **HOME HABITS:** Use lower-intensity bulbs and task lighting in work areas, and avoid illuminating indoor plants and fountains. Close blinds in lit rooms; if doing so increases reflectivity, place window treatments designed to prevent bird strikes on the outside glass. Spread the word to friends and neighbors: “So many bird deaths are happening in ones and twos and threes in homes,” says Christine Sheppard of the American Bird Conservancy. “It’s the hardest thing to tackle because you have to get to each of those homes individually.”

► **OUTDOOR OPTIONS:** Install motion-activated lights; they’re actually more effective for deterring criminals, Sheppard says. If constant night light is necessary, use downward-casting fixtures and install timers. Eliminate or minimize unnecessary lighting, and avoid red, white, and yellow lights in favor of bird-friendly green and blue.

► **OFFICE ETIQUETTE:** If you work in a multi-tenant building, talk to the building’s owner or manager. “If all the tenants were to go to their building manager and say, ‘I want you to stop bird deaths,’ ” change would occur, says FLAP’s Michael Mesure. Encourage scheduling cleaning crews during daylight hours, using dim or no lighting in lobbies after hours, and keeping upper floors as dark as possible. Minimize lights in perimeter rooms and ask coworkers to close blinds when working late. Avoid decorative or rooftop lighting at night, especially between 10 p.m. and 6 a.m.

► **COMMUNITY FIXES:** Join a local Lights Out or Dark Skies program, and ask your local birding club about efforts to monitor collisions.



► **READ MORE** about making windows bird-safe—and learn what to do if you’ve found a stunned bird—at humanesociety.org/allanimals.

BIRD’S-EYE VIEW: This composite, made from images taken by the Defense Meteorological Satellite Program, shows we’re never really in the dark.





Ready, Aim, Cupcakes!

It's take no prisoners when the nation's top bakers cross spatulas on the Food Network's *Cupcake Wars*, vying for \$10,000 and the chance to show off their creations at a celebrity-studded event.

One of the few vegan bakers to compete on the show, Doron Petersan felt the pressure. "I ... had to get a 'wow factor' times two," says the founder of Sticky Fingers Sweets & Eats in Washington, D.C. She also had to be funny. The winning sweets would be served at the 50th anniversary party of The Ice House, a Pasadena comedy club.

Petersan wowed the judges with her opening salvo, a chocolate-and-banana confection dubbed the Gilbert Ganache-fried. Three rounds later, Petersan took the top prize.

For the longtime animal lover—whose spouse is HSUS director of animal protection litigation Peter Petersan—the icing on the victory was showing that cruelty-free cuisine is "not that scary. ... You can have all the luscious, decadent desserts that you've always dreamed of."

While admitting that her competition cupcakes are a bit fancy, Petersan says that vegan baking is "no different, no more difficult" than traditional baking. And some treats—like the prize-winning temptation below—are worth the effort.

—Arna Cohen

George Caramelin Cupcakes—18 servings

CUPCAKES:

2 cups flour	1 ½ cups coconut milk
1 ½ cups sugar	½ cup brewed and cooled coffee
¾ cup cocoa	¾ cup oil
2 teaspoons ground cinnamon	1 teaspoon vanilla extract
2 teaspoons baking soda	2 teaspoons vinegar
½ teaspoon salt	

BOURBON CARAMEL SAUCE:

2 cups sugar
½ cup water
¾ cup bourbon
¼ teaspoon sea salt
2 teaspoons nonhydrogenated vegan margarine

VANILLA BEAN BOURBON FROSTING:

14 ounces nonhydrogenated vegetable shortening
4 ounces nonhydrogenated vegan margarine
3 ½ cups powdered sugar
½ teaspoon vanilla bean paste
⅓ cup bourbon

1. CUPCAKES: Preheat oven to 325° F. Add 18 liners to standard cupcake pans. Sift flour, sugar, cocoa, cinnamon, baking soda, and salt into a medium bowl. In a small bowl, whisk together coconut milk, coffee, oil, and vanilla. Add wet ingredients to dry and whisk until just incorporated. Incorporate vinegar. Do not overmix. Fill liners three-fourths full and bake until a toothpick inserted into each cupcake comes out clean, about 19 minutes. Cool completely.

2. SAUCE: In a small, heavy-bottomed saucepan, stir together sugar and water. Cover and bring to boil until mixture starts to turn brown, about 20 minutes. Remove from heat and add in bourbon and salt while stirring. Once bubbling stops, add margarine and whisk until melted and distributed. Cool completely.

3. FROSTING: Using a stand mixer, whip shortening and margarine until completely combined. Scrape bowl so all ingredients are mixed thoroughly. On low speed, slowly add sugar a little at a time until incorporated. Add vanilla paste and bourbon and mix on low until incorporated. Scrape bowl and mix on medium-high until ingredients are combined and frosting is fluffy, about 2 minutes.

4. ASSEMBLY: Frost cupcakes and drizzle with sauce. Top with candied pecans if desired.

▲ FOR MORE RECIPES, visit humanesociety.org/recipes.

**RECIPE
BOX**



IN THE LIMELIGHT



AT THE
BOX
OFFICE

**The Movie That
Changed His
Mind:** Director
Michael Webber

didn't set out to make a film with a message. He was simply intrigued by two characters: Tim Harrison, an Ohio public safety officer who responds to emergencies involving wild animals kept as pets, and Terry Brumfield, a man who considers two African lions members of his family. By the time Webber finished a documentary about the pair, he had an agenda: to outlaw ownership of wild animals as pets. "The film changed me," Webber says. *The Elephant in the Living Room*, which was partially funded by The HSUS and won a Genesis Award, will be released Aug. 23 on DVD.

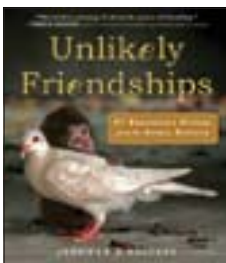
▶ **READ A Q&A** with Webber at humansociety.org/allanimals.



**BOOK
REVIEW**

**Interspecies
Harmony:**
Love knows

no boundaries—that's the theme of the recently published *Unlikely Friendships: 50 Remarkable Stories from the Animal Kingdom* by Jennifer Holland. The thought-provoking tales of interspecies bonds run the gamut—from a pit bull who cozies up with a ferret (both owned by HSUS staffer Laurie Maxwell) to a captive black bear who adopted a stray cat. "It opens your eyes that there's more going on [with animals] neurologically and emotionally than many people might have realized," says Holland, a senior writer for *National Geographic* magazine. "... We can't always apply a strict scientific explanation."



**LEONA
LEWIS**

Voice of Concern: Perhaps best known for the *Avatar* theme song, vocalist Leona Lewis lives with rescued rabbit Melrose; Misty, a dog her brother took in; and Spirit, a Friesian horse named after Lewis's debut album (her third CD is due out late this year). Lewis has lent her fame to many causes, including earthquake relief in Haiti and aid for teenagers diagnosed with cancer. Sporting an "End Animal Testing" temporary tattoo, she recently joined Humane Society International's campaign urging EU politicians to follow through on a promise to ban the sale of animal-tested cosmetics in 2013. In this edited interview with senior writer Karen E. Lange, Lewis talks about the issue closest to her heart: animal welfare.

Q: Describe how you came to love animals as a child in London.

LEWIS: I always felt at peace around animals. I always felt that they were no different [than] human beings, that my animals were my friends. I couldn't bear to see any animal come to harm.

My first memory of animals is having a terrapin when I was very young. My mum also got me a little Yorkshire terrier called Suzy. I visited Wales a lot, where my mum is from. I would be exposed to farm animals and ride horses. I loved to be around [them].

Q: How did your love for animals lead you to activism?

LEWIS: The first time I remember being involved in animal welfare was when I was 10 and we made banners and [wrote] letters in school to protect our local wildlife from littering. As I've gotten older, I've become more aware of the issues and more aware that animals don't have a voice to speak for themselves. I chose to be a vegetarian [at] the age of 12. I stopped wearing leather when I was in my teens.

I have a kinship with animals—I really feel that they get a hard bargain. They can't tell you that they are in pain, and because of this they are abused by humans.

Q: What can people do to make the world a better place for animals?

LEWIS: It is important to begin changing laws because that is where we will really save millions of animals. Regardless of whether you are a vegetarian or vegan or eat meat, no one wants to see the suffering and cruelty that animals go through before they are used for meat.

I would ask that you think about your choices. There is always an alternative. Be aware and buy options that are genuinely humane.

